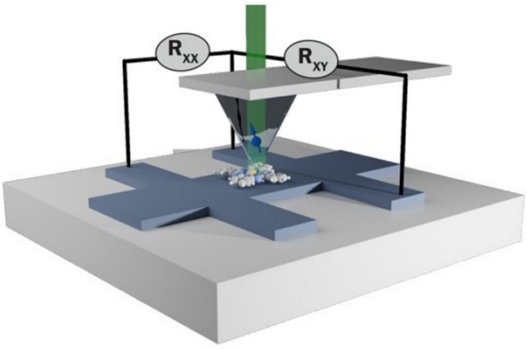
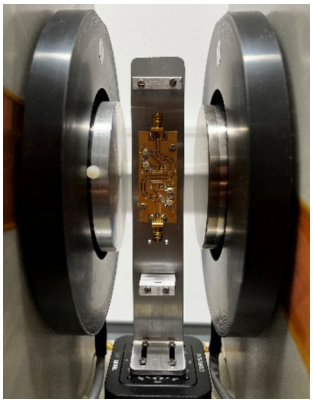
Open Positions in Spintronics in unconventional Materials Systems

The development of charge-based devices is fast approaching its limits. Spintronics is among the most promising alternatives. Our group at the Johannes Gutenberg University Mainz aims to tackle this pressing challenge by making use of the unique features of unconventional materials systems. For this, we investigate the underlying fundamental physics of spin-related phenomena and apply the gained insights to design novel device architectures. Our experimental toolkit is multifaceted, it ranges from **electrical magneto-transport measurements** to **X-ray imaging** of magnetic structures and **quantum sensing using NV centers**. Currently, the focus lies on the following two materials systems:

I. **Hybrid molecular-magnetic systems** allow for targeted manipulation of the interfacial density of states by molecular design,

II. **Antiferromagnets** offer the prospect of non-volatility and radiation hardness on a nanoscale combined with ultrafast spin dynamics in the THz frequency range.





What we offer:

- Hands-on and independent work in a state-of-the-art magnetism lab
- Possibility to acquire and expand a diverse set of skills including
  - Nanofabrication
  - Use and development of cutting-edge electrical and optical measurement techniques
  - Synchrotron-based x-ray imaging
  - Data analysis
- Interdisciplinary and national and international collaborations
- Dissemination of results at international conferences and workshops, and publication in peer-reviewed journals
- Room for developing your own scientific ideas

We currently have several openings on different levels ranging from **research internships (HiWi)** to **Bachelor/ Master thesis** and **PhD positions**.

JGU is diverse and welcomes qualified applications from people with varied backgrounds. We aim to increase the number of women in the field of research and teaching and therefore encourage female researchers to apply. Candidates with severe disabilities and appropriate qualifications will be given priority.

Please do not hesitate to contact us for further information:

JProf. Dr. Angela Wittmann
Johannes Gutenberg Universität Mainz
Institut für Physik, Staudinger Weg 7, 55128 Mainz, Germany
wittmann-applications@uni-mainz.de
(+49) 06131-3924895
https://wittmann-lab.uni-mainz.de/